REMARKS/ARGUMENTS

In the Office Action mailed January 11, 2008, claims 1-5 were rejected. In response, Applicant hereby requests reconsideration of the application in view of the amendments and below-provided remarks. No claims are added or canceled.

For reference, claim 3 is amended. In particular, claim 3 is amended to refer to the variable adaptive factor a(E), which is recited in claims 1 and 2 from which claim 3 depends. Applicant submits that this amendment provides consistency with the antecedent claim terminology of claims 1 and 2.

Claim Rejections under 35 U.S.C. 102

Claims 1-5 were rejected under 35 U.S.C. 102(b) as being anticipated by Park et al. (U.S. Pat. No. 5,748,231, hereinafter Park). However, Applicant respectfully submits that these claims are patentable over Park for the reasons provided below.

Independent Claim 1

Claim 1 recites "defining a modified vector, called integrated motion vector IMV(t) at the instant t and designating the final motion vector correction to be applied to the current frame in view of its motion correction, said integrated motion vector being given by the expression: IMV(t)=GMV(t)+a(E) . IMV(t-1) where GMV(t) is the global motion vector of the current frame at the instant t, a(E) is a variable adaptive factor depending on an expression E and IMV(t-1) is the integrated motion vector corresponding to the previous current frame" (emphasis added).

In contrast, Park does not disclose a variable adaptive factor. Moreover, Park does not disclose a variable adaptive factor which depends on an expression, as recited in the claim. In general, Park describes a digital image stabilization device which uses a variety of vectors to stabilize an image. Park, Abstract. More specifically, Park describes generating local motion vectors (LMVs) for each of a plurality of local motion estimation areas (MEAs) within an image. Park, column 6, lines 18-45. The LMVs for the image are then combined to generate a field motion vector (FMV) for the image. Park, column 6, lines 46-53. Consecutively received FMVs are then accumulated to

generate an accumulated motion vector (AMV). Park, column 6, lines 53-57. The AMV is then used to determine whether image motion should be corrected using stabilization or whether it the image motion is a result of intentional movement (e.g., panning). Park, column 7, lines 15-18.

Park also explains that the AMV of a current field, or image, is calculated based on a combination of the AMV of the previous field, the FMV, and a constant attenuation-coefficient. Park, column 21, lines 34-41. In particular, the attenuation-coefficient is a factor between zero and one. Additionally, Park explains that the attenuation-coefficient is experimentally measured and decided. Park, column 21, lines 53-56. While the attenuation-coefficient is constant, it should be noted that Park describes an embodiment which uses to separate, constant attenuation-coefficients, k1 and k2, which are switched based on a determination whether camera movement is intentional (e.g., panning) or unintentional. Park, column 21, lines 64-67. More specifically, the attenuation-coefficient k1 has a constant value of 0.995, and the attenuation-coefficient k2 has a constant value of 0.97. Park, column 21, lines 56-64. Depending on whether the camera movement is determined to be an unintentional hand-fluctuation or an intentional panning motion, the attenuators apply either the first attenuation-coefficient k1 or the second attenuation-coefficient k2 to the AMV of the previous field. Part, column 22, lines 48-54.

Thus, from the description of Park, it can be seen that the attenuation-coefficients are not variable adaptive factors, as recited in the claim. Even though the attenuation-coefficients k1 and k2 of Park may be switched, depending on the type of movement of the camera, the individual attenuation-coefficients have constant values. The constant values of the individual attenuation-coefficients are experimentally measured and decided prior to implementation of the AMV generation unit in which they are used. Moreover, the schematic illustration of Fig. 11 implicates a hardware implementation of the AMV generation unit, in which the attenuators 116 and 117 are implemented to maintain constant values according to the pre-determined attenuation-coefficients. There is no description of a mechanism to change, or vary, the values of the attenuation-coefficients k1 and k2 within an implementation of the AMV generation unit. Hence, even if switching between the constant attenuation-coefficients based on the type of camera

movement detected were considered to be an adaptive implementation within the AMV generation unit, the individual attenuation-coefficients are nevertheless constant and are not variable in regard to the attenuation values they implement. Therefore, the attenuation-coefficients described in Park are not variable adaptive factors at least because the attenuation-coefficients have constant values which are not variable.

Additionally, the attenuation-coefficients described in Park are not variable adaptive factors which depend on an expression. Rather, Park explains that the attenuation-coefficients are experimentally measured and decided. Hence, the attenuation-coefficients are an indication of a measurement, rather than a value associated with some type of mathematical or other expression. Therefore, the attenuation-coefficients described in Park are not variable adaptive factors depending on an expression at least because the attenuation-coefficients are merely derived from experimental measurements.

For the reasons presented above, Park does not disclose all of the limitations of the claim because Park does not disclose a variable adaptive factor, generally, or a variable adaptive factor depending on an expression, more specifically, as recited in the claim. Accordingly, Applicant respectfully asserts claim 1 is patentable over Park because Park does not disclose all of the limitations of the claim.

Independent Claim 5

Applicant respectfully asserts independent claim 5 is patentable over Park at least for similar reasons to those stated above in regard to the rejection of independent claim 1. In particular, claim 5 recites "defining a motion vector, called integrated motion vector IMV(t) at the instant t and designating the final motion vector correction to be applied to the current frame in view of its motion correction, said integrated motion vector being given by the expression IMV(t)=GMV(t)+a(E) . IMV(t-1) where GMV(t) is the global motion vector of the current frame at the instant t, a(E) is a variable adaptive factor depending on an expression E and IMV(t-1) is the integrated motion vector corresponding to the previous current frame, and modifying the video data according to the modified integrated motion vectors defined for each successive current frame" (emphasis added).

Here, although the language of claim 5 differs from the language of claim 1, and the scope of claim 5 should be interpreted independently of claim 1, Applicant respectfully asserts that the remarks provided above in regard to the rejection of claim 1 also apply to the rejection of claim 5. Accordingly, Applicant respectfully asserts claim 5 is patentable over Park because Park does not disclose a variable adaptive factor, generally, or a variable adaptive factor depending on an expression, more specifically, as recited in the claim.

Dependent Claims

Claims 2-4 depend from and incorporate all of the limitations of independent claim 1. Applicant respectfully asserts claims 2-4 are allowable based on an allowable base claim. Additionally, each of claims 2-4 may be allowable for further reasons, as described below.

In regard to claim 2, Applicant respectfully submits claim 2 is patentable over Park because Park does not disclose all of the limitations of the claim. Claim 2 recites "said variable adaptive factor depends on the sum of the two last global motion vectors" (emphasis added). In contrast, the cited portions of Park (Fig. 11, adder 113; column 22, line 23; and column 23, lines 1-15) merely describe adding the FMV to an attenuated version of the previous AMV, which is attenuated by one of the attenuation-coefficients k1 and k2. Nevertheless, the cited portions of Park do not describe how the attenuation-coefficients are derived. In fact, Park does not describe deriving the attenuation-coefficients based on the sum of two FMVs (or any other vectors). Rather, as explained above, Park explicitly states that the attenuation-coefficients are experimentally measured and decided. Since Park merely describes experimentally measuring and deciding the attenuation-coefficients, Park does not disclose all of the limitations of the claim because Park does not describe a variable adaptive factor which depends on the sum of two previous global motion vectors. Accordingly, Applicant respectfully asserts claim 2 is patentable over Park because Park does not disclose all of the limitations of the claim.

In regard to claim 3, Applicant respectfully submits claim 3 is also patentable over Park because Park does not disclose all of the limitations of the claim. Claim 3 recites "the variable adaptive factor a(E) is determined independently for the horizontal

and vertical coordinates of the vectors" (emphasis added). While the Office Action asserts that the indicated limitation is purportedly disclosed in Fig. 12, a review of Figs. 12A-C and the accompanying disclosure reveals that the cited portion of Park merely relates to determining which attenuation-coefficients to use based on a panning identification signal, PID, which indicates whether a movement is determined to be intentional or unintentional. Hence, there is no disclosure of deriving the attenuation-coefficients independently for horizontal and vertical coordinates of an image or corresponding vectors. Therefore, Park does not disclose all of the limitations of the claim because Park does not describe a variable adaptive factor which is determined independently for horizontal and vertical coordinates of the vectors. Accordingly, Applicant respectfully asserts claim 3 is patentable over Park because Park does not disclose all of the limitations of the claim.

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-3444** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-3444** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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